

3/23/07

PTO/SB/08a (08-03)

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	10650585
Filing Date	2003-08-28
First Named Inventor	Daniel Lamarre
Art Unit	1648
Examiner Name	Li, Bao Q.
Attorney Docket Number	13/082-1-D1

**U.S. PATENTS**


Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
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/BL/	1	0008469	WO		2000-02-17	Potts, et al.		<input type="checkbox"/>

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**NON-PATENT LITERATURE DOCUMENTS**


/Bao Li/

04/30/2007

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Examiner Signature	/Bao Li/	Date Considered	04/30/2007
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**Complete if Known**

Application Number	10/650,585
Filing Date	August 28, 2003
First Named Inventor	Thibeault, D. et al
Art Unit	To be assigned
Examiner Name	To be assigned
Attorney Docket Number	13/082-1-D1

## U. S. PATENT DOCUMENTS

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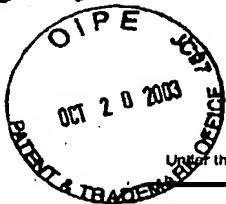
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MM ↓		LILIANA CHEMELLO ET AL; The effect of Interferon alfa and ribavirin combination therapy in naive patients with chronic hepatitis C; Journal of Hepatology 1995; Vol. 23 (suppl.2) page 8-12; Issue number 0169-5185; Clinica Medica 2 and Anatomia Patologica, University of Padova, Italy	
		M. WENZEL ET AL; Establishment of a Cell-based Assay for Evaluation of Compounds against HCV NS2-3 Protease Activity; Session 8.H. Paper 91; 1999 page 409; XP-001041586	
		LUISA PIERONI ET AL; In Vitro Study of the NS2-3 Protease of Hepatitis C Virus; Journal of Virology 9/1997 page 6373-6380 Vol. 71 No. 9; American Society for Microbiology	
		PAUL L. DRAKE ET AL; Inhibition of Hepatitis C Virus NS2/3 processing by NS4A peptides; The Journal of Biological Chemistry; 1999, Vol. 274 No. 49 page 34511-34514; The American Society for Biochemistry and Molecular Biology, Inc. USA	
		KAREN E. REED ET AL; Hepatitis C Virus-Encoded NS2-3 Protease: Cleavage-Site Mutagenesis and Requirements for Bimolecular Cleavage; Journal of Virology 7/1995 Vol. 69 No. 7 page 4127-4136; American Society for Microbiology	
		ELISA SANTOLINI ET AL; The NS2 Protein of Hepatitis C Virus Is a Transmembrane Polypeptide; Journal of Virology 12/1995 Vol. 69 No. 12 page 7461-7471; American Society for Microbiology	
		DIANE THIBEAULT ET AL; In Vitro Characterization of a Purified NS2/3 Protease Variant of Hepatitis C Virus; The Journal of Biological Chemistry; 12/2001, Vol. 276 No. 49 page 46678-46684; The American Society for Biochemistry and Molecular Biology, Inc.	
	Copy of International Search Report for PCT/CA 01/01786 Baogun L: 5/17/2007		

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Signature

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			Application Number	To be assigned	
			Filing Date	August 28, 2003	
			First Named Inventor	Thibeault, Diane	
			Group Art Unit	1648	
Examiner Name	To be assigned				
Sheet	1	of	4	Attorney Docket Number	13/082-1-D1

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>a</sup> (if known)			
MM	AUS1	5,714,371		Ramanathan	02-03-1998	
	AUS2					
	AUS3					
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		Office	Number	Kind Code (if known)				
MM	AF1		WO 01/16379		Merck & Co., Inc.	03-08-2001		<input type="checkbox"/>
↓	AF2		WO 01/68818		ISTI-TUTO DI Ricerche Di Biologia Molecolare P. Angeletti	09-20-2001		<input type="checkbox"/>
	AF3		WO 99/07733		Boehringer Ingelheim Canada Ltd.	02-18-1999		<input type="checkbox"/>
	AF4		WO 97/08304		Istituto Di Ricerche Di Biologia Molecolar S.P.A.	03-06-1997		<input type="checkbox"/>
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	AF6							<input type="checkbox"/>
	AF7							<input type="checkbox"/>
	AF8							<input type="checkbox"/>
	AF9							<input type="checkbox"/>
	AF10							<input type="checkbox"/>

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Substitute for form 1449B/PTO  <b>NON-PATENT DOCUMENTS SUBMITTED BY APPLICANT</b>		Complete if Known			
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Sheet	2	of	4	Attorney Docket Number	13/082-1-D1

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
mm	AO1	CHIRGWIN, PRZYBYLA et al.; Isolation of Biologically Active Ribonucleic Acid from Sources Enriched in Ribonuclease; Biochemistry; 1979, v. 18; 5294-5299	<input type="checkbox"/>
	AO2	DARKE, JACOBS et al.; Inhibition of Hepatitis C Virus NS2/3 Processing by NS4A Peptides; J. Biol. Chem.; 1999, V. 274, No. 49; 34511-34514	<input type="checkbox"/>
	AO3	GRAKOU, MCCOURT et al.; A second hepatitis C virus-encoded proteinase; Proc. Natl. Acad. Sci. USA; 1993, V. 90; 10583-10587	<input type="checkbox"/>
	AO4	KOLYKHALVO, MIHALIK et al.; Hepatitis C Virus-Encoded Enzymatic Activities and Conserved RNA Elements in the 3' Nontranslated Region are Essential for Virus Replication In Vivo; 2000, V. 74, No. 4; 2046-2051	<input type="checkbox"/>
	AO5	LIN, TIMASHEFF; On the role of surface tension in the stabilization of globular proteins; Protein Sci.; 1996, V. 5; 372-381	<input type="checkbox"/>
	AO6	LIU, BHAT et al.; The Hepatitis C Virus NS2 Protein Generated by NS2-3 Autocleavage is Required for NSSA Phosphorylation; Biochem. Biophys. Res. Commun.; 1999, V. 254; 572-577	<input type="checkbox"/>
	AO7	NEDDERMANN, CLEMENTI et al.; Hyperphosphorylation of the Hepatitis C Virus NS5A Protein Requires an Active NS3 Protease, NS4A, NS4B, and NS5A Encoded on the Same Polyprotein; J. Virol.; 1999, V. 73, No. 12; 9984-9991	<input type="checkbox"/>
	AO8	PALLAORO, LAHM et al.; Characterization of the Hepatitis C Virus NS2/3 Processing Reaction by Using a Purified Precursor Protein; J. Virol.; 2001, V. 75, No. 20; 9939-9946	<input type="checkbox"/>
	AO9	PIERONI, SANTOLINI et al.; In Vitro Study of the NS2-3 Protease of Hepatitis C Virus; J. Virol.; 1997, V. 71, No. 9; 6373-6380	<input type="checkbox"/>
	AO10	REED, GRAKOU et al.; Hepatitis C Virus-Encoded NS2-3 Protease: Cleavage-Site Mutagenesis and Requirements for Bimolecular Cleavage; J. Virol.; 1995, V. 69, No. 7; 4127-4136	<input type="checkbox"/>
✓	AO11	SANTOLINI, PACINI et al.; The NS2 Protein of Hepatitis C Virus is a Transmembrane Polypeptide; J. Virol.; 1995, V. 69, No. 12; 7461-7471	<input type="checkbox"/>

Examiner Signature	<i>moller</i>	Date Considered	5-26-05
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Sheet	3	of	4	Attorney Docket Number	13/082-1-D1

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MM	AO1	THIBEAULT, MAURICE et al.; In Vitro Characterization of a Purified NS2/3 Protease Variant of Hepatitis C Virus; J. Biol. Chem.; 2001, V. 276, No. 49; 46678-46684	<input type="checkbox"/>
	AO2	WALKER, M.A.; Hepatitis C virus: an overview of current approaches and progress; Drug Discovery Today; 1999; V. 4, No. 11; 518-529	<input type="checkbox"/>
	AO3	DYMOCK, JONES et al.; Novel approaches to the treatment of hepatitis C virus infection; Antiviral Chemistry & Chemotherapy; 2000; V. 11(2); 79-96	<input type="checkbox"/>
	AO4	GORBALENYA, SNIJDER; Viral cysteine proteinases; Perspect. Drug Discovery Design; 1996; V. 6; 64-86	<input type="checkbox"/>
	AO5	HIJIKATA, MIZUSHIMA et al.; Two Distinct Proteinase Activities Required for the Processing of a Putative Nonstructural Precursor Protein of Hepatitis C Virus; J. Virol; 1993; V. 67, No. 8; 4665-4675	<input type="checkbox"/>
	AO6	HIROWATARI, HIJIKATA et al.; Two proteinase activities in HCV polypeptide expressed in insect cells using baculovirus vector; Arch. Virol.; 1993; V. 133; 349-356	<input type="checkbox"/>
	AO7	KOMODA, HIJIKATA et al.; Processing of hepatitis C viral polyprotein in Escherichia coli; Gene; 1994; V. 145; 221-226	<input type="checkbox"/>
	AO8	WADA, WADA et al.; Codon usage tabulated from the GenBank genetic sequence data; Nuc. Acids Research; 1992; V. 20; 2111-2118	<input type="checkbox"/>
	AO9	WONG, ALBRIGHT, et al.; Immobilized Metal Ion Affinity Chromatography (IMAC) - Chemistry and Bioseparation Applications; Separation and Purification Methods; 1991; V. 20(1); 49-106	<input type="checkbox"/>
	AO10	AUSUBEL, BRENT et al.; Current Protocols in Molecular Biology; 1994; Vol. 1, 2, 3 and 4; Wiley, New York	<input type="checkbox"/>
	AO11	SAMBROOK, FRITSCH et al.; Molecular Cloning - A Laboratory Manual, Second Edition; 1989; Cold Spring Harbor Laboratory Press	<input type="checkbox"/>

Examiner Signature	<i>Mosley</i>	Date Considered	- 5 - 26 - 05
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I	AO2	WENZEL, TROXELL et al.; Establishment of a Cell-Based Assay for Evaluation of Compounds against HCV NS2-3 Protease Activity; Prog. & Abstr. Interscience Conf. Antimicrobial Agents & Chemo.; 1995; V. 39; 409	<input type="checkbox"/>
↓	AO3	PCT International Search Report of PCT/CA 01/01796 International Filing Date Dec. 13, 2001	<input type="checkbox"/>
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	AO5		<input type="checkbox"/>
	AO6		<input type="checkbox"/>
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	AO10		<input type="checkbox"/>
	AO11		<input type="checkbox"/>

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First Named Inventor

Diane THIBEAULT

Art Unit

1648

Examiner Name

Mary Mosher

Attorney Docket Number

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MM		C. STEINKUEHLER, ET AL., In vitro activity of purified HCV NS2/3 protease, 7th International Meeting on Hepatitis C and Related Viruses (molecular Virology and Pathogenesis), Dec. 3-7, 2000, Australia.	
MM		M. D. RYAN et al., Hepatitis C virus endopeptidase 2, Family U39, Article No. 567, pp 1600-1604 (1998)	
MM		Y. HIROWATARI et al., A novel method for analysis of viral proteinase activity encoded by Hepatitis C Virus in Cultured Cells, Analytical Biochemistry 225, p 113-120 (1995)	
MM		Z. WU et al., Mechanism of autoproteolysis at the NS2-NS3 junction of the hepatitis C virus polyprotein, TIBS 23 - March 1998, p 92-94.	

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Signature

/Mary Mosher/

Date  
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